

Commonwealth of Kentucky  
Division for Air Quality

***PERMIT STATEMENT OF BASIS***

TITLE V/~~SYNTHETIC~~ MINOR DRAFT PERMIT No. V-03-008

Trus Joist, A Weyerhaeuser Business

610 Trus Joist Lane

Chavies, Kentucky 41727

APRIL 23, 2003

BEN MARKIN, REVIEWER

PLANT I.D. # 021-193-00097

APPLICATION LOG # F916/50711

**SOURCE DESCRIPTION:**

A TV operating permit application received from Trus Joist, A Weyerhaeuser Business, on December 04, 1998 was considered administratively complete on February 12, 1999. The facility currently operates under permit numbers C-93-111 revision 2, S-96-256, S-97-033 and the most recent VS-02-008. The plant consumes more than 200,000 cords of "low grade" timber annually; in the manufacture of Laminated strand Lumber (LSL), Timber Strand and TJI wood I-joist. The LSL process includes whole logs (debarked), cut in length, and processed into thin, long strands. The strands are then dried, coated with polyurethane MDI resin, and formed into a rough billet. Lastly, the billet is pressed into a billet approximately 8-feet wide by 48-long and several inches thick using steam injection technology. The general processing runs through the log and strand preparation, heating/energy, blending-forming-press, and finishing areas, which is tied to the TJI production department.

**Laminated strand Lumber (LSL), Timber Strand Processes**

*Log prep:*

Logs are received, scaled and stored. They are later debarked, cut in length

*Strand prep:*

The debarked logs are sent to two stranders that process the logs into strand materials. They are then stored in storage bins for an hour; then conveyed into triple tiered dryers. Tied to this is the Baghouse #1, Cyclones #'s 1-3 for the residual collection, as well as the Electrified Filter Bed (EFB) to control particulate emissions from the furnace and the drying process.

*Heat/Energy area:*

The heat is provided by three (3) 80 MMBTU/hr wood fired-furnaces, each containing two firing cells. Bark, chips, and other wood material that is recycled from the Timber strand process and controlled by the EFB, fire the furnace. Propane is used as emergency backup fuel in an auxiliary 35 MMBTU/hr furnace.

*Blending, Forming and Pressing Area:*

The process involves the spraying of polyurethane (MDI) resin and wax (water inhibitor) on the metered strands from the dryers. The outputs; completed mats are cut into sections and conveyed into the steam injection press for compaction. Baghouses #'s 2 and 3 are use as collection control devices.

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### *Finishing area:*

The automated line, consist of wood hammermills (woodhogs), sander, rip saw and dimensioning saws. Dust collected at this end is used for the furnace system, through a supply line from the baghouse #'s 4, 5, 6 and Cyclone #'s 4,5 and 6.

### **TJI production involves approximately 90,000,000 lineal feet of I-joist per year.**

#### *Wood processing includes:*

Rip timber strand billets into flanges, scarf finger-joints to join short sections of flange stock into usable length; serrate web stock to provide web joint, profile edges of webs to match routed flange. Route flanges to insert profiled webs, which cuts I-joist to size.

#### *Adhesive application includes:*

Fingers-joints cured by RF press, web joints cured in oven, route joints cured in oven and I-joist oven (heated by propane or natural gas)

#### *Sealing includes:*

Combination of fungicide and moisture sealers applied to the finished joist, drying in TJI oven.

### **APPLICABLE REGULATIONS:**

Regulation 401 KAR 59:010, new process operation, apply to emission units 02 through 13, and 21 through 24.

Regulation 401 KAR 59:015, new indirect heat exchanger, apply to emission units 01 (MP01 and MP02).

Regulation 401 KAR 63:010, fugitive emissions, apply to emission units 15 –20 & 25.

Regulation 401 KAR 63:021, Existing sources emitting toxic air pollutants, apply to emission units 21-24.

### **Other Regulation applicable to Emissions Unit 01 (MP01), due to applicability date and/or size of unit:**

Regulation 401 KAR 60:005, Standards of performance for small industrial-commercial-institutional steam generating units, incorporating by reference 40 CFR Part 60, Subpart Dc, applicable to an emissions unit with a design capacity of 100 MMBtu/hr or less and greater than or equal to 10 MMBtu/hr and constructed after June 9, 1989.

Please refer to the permit for details

### **COMMENTS:**

Based on the information provided, Regulation 401 KAR 59:015 and 60:005 incorporating by reference 40 CFR 60 Subpart Dc apply to the boilers constructed after 1972. Regulation 401 KAR 59:010 applies to emission units 02 through 13, and 21 through 24. Additionally, Regulation 401 KAR 63:021 apply to emission units 21 to 24.

Specifically, the allowable emissions limits of 0.09 and 0.01 lb/MMBTU from Regulation 401 KAR 59:015 Section 4 apply to particulate matter (PM) emissions generated while burning wood waste and propane gas respectively. The allowable sulfur dioxide emission limit of 0.12 and 0.80 lb/MMBTU from Regulation 401 KAR 59:015 Section 5 applies to wood waste burning and propane gas respectively.

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Emissions were calculated based on AP 42. Since this review has determined that all requirements will be met, a preliminary determination proposes that an operating permit may be issued as conditioned, but contingent to the satisfactory resolution of any adverse public comments which might be received.

### **EMISSION AND OPERATING CAPS DESCRIPTION:**

Emission of carbon monoxide, particulate matter and nitrogen oxides shall not exceed 245 tons during any consecutive twelve (12) month rolling total.

### **PERIODIC MONITORING:**

Not Applicable

### **OPERATIONAL FLEXIBILITY:**

Not Applicable

### **CREDIBLE EVIDENCE:**

This permit contains provisions, which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements.

At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.